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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/761,262	01/22/2004	Hiroaki Kajita	0229-0793P	2578
2292	7590	05/15/2006	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH			MAKI, STEVEN D	
PO BOX 747			ART UNIT	PAPER NUMBER
FALLS CHURCH, VA 22040-0747			1733	

DATE MAILED: 05/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/761,262

Applicant(s)

KAJITA, HIROAKI

Examiner

Steven D. Maki

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 14 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935-C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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- 1) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- 2) Claims 12-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 12, the description of the axial grooves (which ones?) and narrow grooves (which ones?) in the second wherein clause is ambiguous. In claim 12 lines 8 and 10, it is suggested to insert --in each of the middle parts-- after "grooves".

Claim 14 line 2 ambiguously refers to "the axial grooves" (which ones?).

Claim 15 ambiguously refers to "the narrow grooves" (which ones?).

- 3) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- 4) **Claims 1, 3-4, 8-10, 12-14, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Europe 143 (EP 790143) in view of Japan 804 (JP 3-159804) and Hubbell et al (US 5733393).**

Europe 143 discloses a pneumatic radial tire for a passenger car having improved high speed durability and cornering performance. The tire has a tread, breaker, full width band and edge bands. Europe 143 does not recite providing the tread with blocks, slits and a rib.

As to claim 1, it would have been obvious to one of ordinary skill in the art to provide Europe 143's pneumatic passenger car tire with the tread pattern shown by Japan 804 since Japan 804 teaches providing a pneumatic tire with a tread pattern which comprises slits, center rib, inner circumferential grooves, outer circumferential grooves, intermediate blocks and shoulder blocks (figure 1, 2, 6) such that the tire has improved noise reduction and anti-partial wear. One of ordinary skill in the art would have found the noise reduction obtained by Japan 804's tread pattern desirable in Europe 143's pneumatic passenger car tire since Europe 143 teaches that the tire should avoid decrease in high speed durability and increased running noise. See page 3 lines 9-11 and 36-38.

Furthermore, it would have been obvious to one of ordinary skill in the art to provide Europe 143's pneumatic tire for a passenger car such that it has the claimed "footprint factor" of 75-85% since Hubbell et al, also directed to a pneumatic automobile tire, suggests forming the pneumatic tire such that the footprint factor at standard inflation and load is 77% to 100% (1/1.3 to 1/1) to provide optimal wear and handling properties (Col. 6 lines 1-13).

No unexpected results over the above applied prior art and commensurate in scope with the claims has been shown.

As to claims 3 and 4, it would have been obvious to provide the pneumatic tire with 2-4 axial shoulder grooves in the footprint (ground contacting face) in view of (1) Japan 804's teaching that the tread pattern includes axial shoulder grooves and (2) the above noted teaching from Hubbell to form the pneumatic tire such that the footprint

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factor at standard inflation and load is 77% to 100% (1/1.3 to 1/1) to provide optimal wear and handling properties (Col. 6 lines 1-13). As to theta being 60-80 degrees, Japan 804 suggests this subject matter. The illustrated angle theta1 for Japan 804's axial grooves in figure 1 is about 70 degrees with respect to the circumferential direction.

As to claims 8 and 9, it would have been obvious to incline the straight lines between the ends of the axial grooves at 60-75 degrees and to reversely incline the straight line between the ends of the slits (narrow grooves) at 40-50 degrees since Japan 804 teaches reversely orienting the axial grooves and slits. See figures 1, 2, 6.

As to claim 10, Japan 804's shoulder grooves are crank shaped.

As to claims 12-14, Japan 804 shows middle blocks separated by axial grooves and slits in the middle blocks. See figures 1, 2, 6.

As to claim 16, Japan 804's circumferential grooves are zigzag.

**5) Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Europe 143 in view of Japan 804 and Hubbell as applied above and further in view of Japan 203 (JP 4-11020).**

As to claims 3 and 4, it would have been obvious to provide the pneumatic tire with 2-4 axial shoulder grooves in the footprint (ground contacting face) in view of (1) Japan 804's teaching that the tread pattern includes axial shoulder grooves, (2) the above noted teaching from Hubbell to form the pneumatic tire such that the footprint factor at standard inflation and load is 77% to 100% (1/1.3 to 1/1) to provide optimal wear and handling properties (Col. 6 lines 1-13) and (3) the suggestion from Japan 203

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to provide a tread such that, for example three, axial shoulder grooves are in the footprint. Japan 203 teaches steering stability and prevention of uneven abrasion is improved.

**6) Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Europe 143 in view of Japan 804 and Hubbell et al as applied above and further in view of Rampl (US 4739811).**

As to claims 5-7, it would have been obvious to one of ordinary skill in the art to provide the tread rubber of Europe 143 with the claimed outer rubber and inner rubber in view of Rampl's suggestion to form a tire tread with a harder cap and a softer base wherein the harder cap may have a hardness of 60-80 and a tan delta of greater than 0.1 (e.g. 0.14 to 0.20) and the softer base may have a hardness of 50-70 and a tan delta of smaller than 0.1 (e.g. 0.03-0.08) for improved driving comfort and noise reducing effect (col. 4 line 31+).

**7) Claims 11, 15, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Europe 143 in view of Japan 804 and Hubbell et al as applied above and further in view of Japan 011 (JP 8-113011).**

As to claims 11 and 15, it would have been obvious to one of ordinary skill in the art to provide the slits, which divide the middle blocks and shoulder blocks, with a zigzag shape since Japan 011, disclosing a tread pattern essentially the same as that of Japan 804, teaches using zigzag slits in the shoulder blocks as well as the middle blocks (figure 2).

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As to claims 17 and 18 , it would have been obvious to one of ordinary skill in the art to use the claimed Wa and grooves widths in the tread pattern suggested by Japan 804 since Japan 011, disclosing a tread pattern essentially the same as that of Japan 804, teaches dimensioning the tread pattern with circumferential groove widths of 5-15 mm (4-13% TW), transverse groove widths of 5-10 mm, slit widths of less than 3 mm, etc.

Remarks

8) Applicant's arguments filed 2-14-06 have been fully considered but they are not persuasive.

Applicant argues that the applied prior art fails to suggest a tire having a rectangular ground contacting area. This argument is not commensurate in scope with the claims and is therefore not persuasive. None of the claims require a rectangular ground contacting area and thereby exclude the barrel shaped (generally oval) ground contacting area of Europe 143 and the generally oval footprint with a footprint factor of 77% to 100% of Hubbell et al. It is noted that 77% falls within the claimed range of 75% to 85%.

With respect to applicant's arguments regarding angle theta1, Japan 804 discloses a tread pattern that is essentially the same as that claimed and shown by applicant and therefore suggests the claimed angle theta1.

9) No claim is allowed.

10) Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

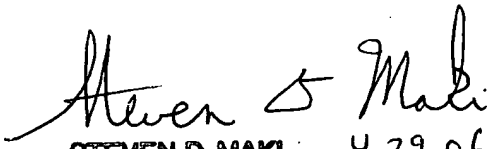
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steven D. Maki  
April 29, 2006

  
STEVEN D. MAKI  
PRIMARY EXAMINER  
4-29-06